MEDICAL AUDIT:

Rationale and Practicalities

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CAMBRIDGE
UNIVERSITY PRESS

Published by the Press Syndicate of the University of Cambridge
The Pitt Building, Trumpington Street, Cambridge CB2 1RP
40 West 20th Street, New York, NY 10011–4211, USA
10 Stamford Road, Oakleigh, Melbourne 3166, Australia

First published 1993

A catalogue record for this book is available from the British Library

Library of Congress cataloguing in publication data available

ISBN 0 521 44604 X paperback

Transferred to digital printing 2001

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Introduction

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The audit of medical practice is neither a new concept nor a new activity. All medical practitioners have examined the effects of their treatment and have assessed outcome for centuries. The major advances in medical practice, particularly during the twentieth century, would not have occurred without observing and assessing the effects of treatment regimes. The main effect of the changes indicated in the HM Government White Paper '*Working for Patients*' and subsequently the National Health Service and Community Care Act (1990) and the directives from the various Royal Colleges has been to emphasise the need for audit activity and to introduce a more formal basis to audit. Audit has also been linked to the need for the cost-effective use of resources.

The purposes of this book are firstly to describe the philosophy of audit in medical practice; secondly to establish the types of information required by the different groups interested in audit; thirdly to outline the ways in which audit activity is being undertaken in various specialties; and fourthly to suggest a coherent pattern for audit and make recommendations for the acquisition and storage of large volumes of information.

Definitions

The general public concept of audit is the annual review of the 'books' of a business. This is a retrospective analysis of the debit and credit of a business. This analysis, however, has the prospective effect of allowing a financial plan to be formulated for the next year. This is a positive feedback loop. The profits and deficits of one year will have a direct effect on the developments of the next year, and in turn on the profits and deficits of the following year.

Audit in medical practice should be viewed in a similar fashion, as a

positive feedback loop. The specific methodology is irrelevant, but unless change follows review, then audit of medical practice will have no effect whatsoever and is a waste of time.

There is a great deal of confusion at present over the definitions that are used in relation to the audit of medical activity. The various authors in this book use the following definitions for medical and clinical audit:

1. Medical audit is defined as the review of the clinical care of patients provided by the medical staff only.
2. Clinical audit is the review of the activity of all aspects of the clinical care of patients by medical and paramedical staff.

A third definition is required, as the above two ignore the effects of resources on the review process. It is the view of the editors that it is impossible to separate clinical practice from resource management and so audit by the medical profession must take into account the effects of resource changes on their clinical practice. A third definition of audit is therefore suggested, called 'patient care audit', and this is defined as the review of all activity within the health service that has a direct effect on patient care. Many clinicians object to, and are frightened by, the resource management aspects of modern day health care. However, any change in clinical practice will have effects on resources and any change in resources will have an effect on clinical practice, and so the two cannot be regarded as separate entities. It is still possible to review clinical treatment separately from resource management in order to improve the day-to-day care of patients, but it must be continually borne in mind that clinicians are expected to provide an efficient and cost-effective service.

Audit versus clinical research

There is a great deal of controversy at present as to what constitutes audit and what constitutes clinical research. We would suggest that clinical research is undertaken when a prospective *controlled* clinical trial is instituted. Clinical trials should, like all forms of scientific research, be based upon an hypothesis and will be subject to statistical analysis. Audit of clinical care is the assessment of the quality of care provided for an individual or group of patients. The audit is undertaken retrospectively (on, hopefully, prospectively acquired patient data) and will examine the usual form of treatment that a particular clinician provides. In order for this to be meaningful it will be necessary for there to be a standard against which to compare; for example, comparing the length of stay following a

hernia repair between two general surgical units or the rate of dislocation after total hip replacement. The value of audit data improves if the collection is systematic and the data are validated.

There will always be a grey area where clinical research and audit do and should overlap but in terms of the day-to-day review of patients the two must not be confused.

A basic concept

A recurring theme throughout this book will be the concept of *structure–process–output* (*outcome*). The term '*structure*' refers to the provision of staff hospital facilities, equipment, etc; '*process*' refers to the activity of providing medical care for patients; '*output* (*outcome*)' refers to the effect of the process on the community as a whole and on individual patients. The closing part of the loop is that measuring outcome must result in a change in process, and this will also have an effect on structure.

Outcome

An intrinsic part of audit in medical practice is the ability to measure outcome. This is a very thorny question and will be covered in many chapters in this book. If we consider outcome as scientists requiring objective, even quantitative, measurement of our activity, then it becomes extremely difficult to define outcome measures. In the area of orthopaedic surgery, the only obvious remotely objective outcome measures are death rates, revision rates for major joint replacement surgery and possibly the rate of non-union of fractures. If we wish to measure outcomes such as the rate of deep venous thrombosis or the rate of wound infection, for example, we have major problems. The problems are one of definition and another of accurately diagnosing these conditions. Measures of outcome in these areas, therefore, become significantly subjective. Further, if we consider patient satisfaction and quality of care then the outcome measures become wholly subjective. However, we cannot entirely base our measurement of outcome on scientific methodology. We are expected to maintain an acceptable standard of medical care which requires us to achieve an 'excellent' or 'good' result with the minimum of complications for each individual patient. We must therefore accept a degree of subjectivity in assessing outcome and accept that we cannot apply statistical methods with any degree of accuracy in order to compare one unit's outcome with another.

Guidelines

Two important statements are made in the White Paper '*Working for Patients*'. Both statements appear in the introduction in the White Paper and are called 'key changes'. The first key change is defined as 'to make the Health Service more responsive to the needs of patients, as much power and responsibility as possible will be delegated to the local level'. The second definition of importance to this book is the seventh key change, 'to ensure that all concerned with delivering services to the patient make the best use of the resources available to them, quality of service and value for money will be rigorously audited'. The guidelines in the White Paper for medical audit are fairly clear cut. These guidelines, together with the recommendations from the various Royal Colleges and the King's Fund should be used as the basis for the clinical and medical aspects of audit. However, the guidelines are certainly not rigorous, and it is up to the individual specialties, and also to some extent the local audit committees, to define how audit will be undertaken. It would seem that the central bodies have purposely allowed the local medical audit committees to define the medical audit activity and have not imposed rigorous requirements. The development of audit is an evolutionary process. Structured audit has no experts at present and it is the role of the interested clinician to define the guidelines for the day-to-day running of medical audit. It is not the intention of this book to impose our view as to how audit should be undertaken, but to provide the essential information that is required so that individual units can decide how best to undertake this activity.

The unenthusiastic clinician

Only a small number of clinicians are real enthusiasts for clinical audit. The majority of consultants see audit simply as another activity, which will only have the effect of taking them away from their clinical activities. Further, some clinicians at senior and junior level will be frightened at the prospect of having their clinical activity examined by another clinician. The answer to the first problem is for the enthusiasts to demonstrate that the review of clinical activity can actually make the provision of services more efficient and more effective for the patients. In order to ensure that fear of criticism or embarrassment is eliminated it is essential that confidentiality is maintained but that defects of practice become apparent to the individual concerned so that they can effect change.